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**United States
Department of
Agriculture**

Marketing and Regulatory Programs

Agricultural Marketing Service

Livestock and Seed Program

Items of Interest in Seed Control

Fall 1997

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HIGHLIGHTS OF FISCAL YEAR 1997 ACTIVITIES

The following are some highlights of Seed Regulatory and Testing Branch (SRTB) activities during fiscal year 1997, October 1, 1996, through September 30, 1997. We received 459 Federal Seed Act (FSA) complaints and made 561 FSA cases. (A complaint often results in more than one FSA case when we find that the seed was shipped in interstate commerce more than once.) During the year we closed 597 cases. We wrote letters of warning on 399 cases, settled 77 cases with penalties totaling \$27,450, waived monetary penalties on 16 cases, and held 25 cases in abeyance pending the future performance of the shippers involved. We took no FSA action on 80 cases. We ended the year with 509 cases pending.

A few other highlights include:

- The SRTB's Testing Section (the Federal Seed Laboratory) received a total of 4,874 samples to test including 1,926 FSA samples, 511 check tests, and 1,559 service samples.
- Our staff conducted a 1-week Federal Seed Analyst School, a 3-day seed analyst workshop, and 4 half-day seed inspector's workshops.
- We checked approximately 920 proposed variety names for compliance with the FSA and cleared 692 of those for use as variety names.
- We evaluated 1,600 plots for trueness-to-variety (TTV).
- The SRTB was the host to more than 70 international visitors.
- We developed laboratory methods to check samples for herbicide resistance.
- We provided more than 6,100 specimens from the Reserve Seed Collection to international, Federal, State, and private seed laboratories.

NEW AMS ADMINISTRATOR NAMED

On October 24, 1997, Agriculture Secretary Dan Glickman named Enrique Esquivel Figueroa the new Administrator of the Agricultural Marketing Service (AMS). Secretary Glickman said, "I am delighted to announce the appointment of Dr. Figueroa to head AMS. His knowledge of economics and trade will serve this Department well as we move forward with our strategic goal of expanding economic and trade opportunities for agricultural producers and other rural residents."

Dr. Figueroa comes to USDA from Cornell University where he was, since November 1992, an associate professor in the Department of Agricultural, Resource and Managerial Economics. He was an assistant professor in Cornell's Department of Agricultural Economics from November 1986 to November 1992. Before that he was a postgraduate research agricultural economist and a research assistant in the Department of Agricultural Economics at the University of California at Davis.

His experience includes work as a staff assistant to the House Committee on Agriculture for the U.S. Congress in 1982 and as a staff assistant in the California Department of Parks and Recreation in 1980 and 1981. He spent four years from 1976 to 1980 with the California Conservation Corps.

Dr. Figueroa has a Ph.D. in agricultural economics and a Master of Science in horticulture from the University of California at Davis. He received his Bachelor of Science degree in agricultural education from California State University in Fresno.

Former AMS Administrator Lon Hatamiya has been named as the Administrator of USDA's Foreign Agricultural Service. In his new job Mr. Hatamiya will oversee programs that foster exports of American agricultural, fish, and forest products.

NEW ORGANIZATIONAL NAME AND SUPERVISORY TITLES

Effective September 18, 1997, the Assistant Secretary for Administration approved the reorganization of AMS. This reorganization was made to support USDA's streamlining initiatives by establishing a flatter and more efficient organizational structure. As a result, the SRTB is now part of the Livestock and Seed Program. Additionally, the titles of the Livestock and Seed Program supervisors have been changed. Barry L. Carpenter is now Deputy Administrator and Robert L. Leverette is Associate Deputy Administrator.

USDA COMMITMENT TO CIVIL RIGHTS

Elsewhere in this issue of Items of Interest in Seed Control (and in all current USDA publications) is a brief statement of USDA's prohibition of discrimination. It is our long-standing policy to treat all people with dignity and respect. This includes not only employees, but customers, job applicants, and all other members of the public we have contact with. This standard of fairness also applies to our State Cooperators in the Equal Opportunity Clause which is included as part of the Cooperative Agreement. It states in part that "The Cooperator will not discriminate against any employee or applicant for employment" and goes on to say that they will be "treated without regard to their race, color, religion, age, disability, sex, marital status, or national origin." Simply stated, this means that everyone is to be treated fairly and equitably.

Recently, Secretary of Agriculture Dan Glickman appeared before the House Committee on Agriculture to testify on the importance of civil rights at the U.S. Department of Agriculture and to describe progress made in that area. He summed up by saying, "We can't change how every person treats every other person. But *we can* demand a basic respect for the human rights and dignity of our customers and employees. If we do, . . . we will dramatically improve USDA's ability to serve agriculture and our nation."

We commend his words to you and assure you that the SRTB staff will continue to hold ourselves to this standard.

PRESENTATION GIVEN AT SEED ANALYSTS WORKSHOP

SRTB botanist James Schoen gave a presentation at the annual Northeast Seed Analysts Workshop (NESAW). The Southern States Cooperative, Inc. laboratory in Richmond, VA, was the host to the October 1-2, 1997, Workshop. Schoen presented two different topics: laboratory tests of herbicide tolerant crops and laboratory testing of oat varieties using black light to distinguish misidentified seed lots. He showed slides and used live seedling displays to explain the new test for herbicide tolerant soybean varieties. Other participants gave presentations on seed identification of various species, germination tests, fluorescence tests, tetrazolium tests, and discussed recent changes to the Association of Official Seed Analysts Rules for Testing Seed and changes to Animal and Plant Health Inspection Service (APHIS) regulations on imported seed. Twenty seed analysts from 7 states in the region participated; 16 of the seed analysts were from State laboratories and 4 analysts were from commercial laboratories. Rodney Young, a botanist from APHIS (and formerly an SRTB seed analyst), was also a speaker.

NESAW is an annual workshop held each fall to discuss mutual problems and keep up with new seed testing information and technology. It is organized by seed analysts from the northeastern United States. Participants come from states throughout the northeast. The responsibility for holding the workshop is rotated among the various laboratories involved.

PROFESSIONAL AGRICULTURAL INSPECTOR NATIONAL TRAINING

SRTB marketing specialist Don Dreyer attended a portion of the Eastern Region Inspector Seminar of the Professional Agricultural Inspector National Training (PAINT) program held in Harpers Ferry, WV, October 7-9, 1997. The seminar was coordinated by the West Virginia Department of Agriculture. The personnel involved with PAINT are State inspectors and supervisors of agricultural commodities such as feed, seed, and fertilizer. The 3-day seminar had more than 80 attendees and speakers from 16 states.

The afternoon of October 9 was devoted to seed matters. Dreyer spoke on the FSA and the cooperative relationship between State programs and AMS. Bob Geiger, Chief Inspector, Indiana Office of State Chemist and Seed Commissioner, spoke on the subject "Sampling Bulk Seed and Mini-bulk Bags"; and Malcolm Sarna, Chief, Turf and Seed Section, Maryland Department of Agriculture, addressed "Effective Seed Complaint Investigation." During the seminar, other subjects included oral and written communications, conflict management, stress management, risk management, safety, and inspection and sampling techniques for fertilizer and for feed.

PAINT is sponsored by the Association of American Feed Control Officials, the Association of American Plant Food Control Officials, and the Association of American Seed Control Officials (AASCO). PAINT had a similar seminar for the western region held in November by the Colorado Department of Agriculture.

SEED LABELING WORKSHOP

At the request of the Oregon Seed Trade Association (OSTA) and the Oregon Department of Agriculture, SRTB marketing specialist Harold Laswell participated in a joint Federal-State Seed Labeling Workshop. The meeting was held in Corvallis, OR, on October 22, 1997. More than 100 people from the Oregon seed trade, the Oregon Seed Certification Service, State and private laboratories, and the Oregon Department of Agriculture attended the meeting.

An open forum slide presentation was followed by a question and answer session. Topics included FSA records requirements, the purpose and use of tolerances, labeling seed for shipment into states with undesirable grass seed requirements, test date requirements on grass seed mixtures, variety vs. brand labeling, false advertisements, and variety not stated labeling. Of particular importance was a discussion on whether or not there is a way to alter rules to shorten laboratory test time on samples. It appears that this year, most of the seed laboratories in Oregon are experiencing extensive delays in completing purity, noxious weed, and germination tests. For sale in Oregon, the State permits seed producers to label the percentage of viable seed shown by a tetrazolium test; this is permitted before completion of the germination test.

The OSTA approved a recommendation to send their representatives to future annual meetings of the AASCO and the Association of Official Seed Certifying Agencies.

CELEBRATION OF AMERICA'S BOUNTY

Again this year, the SRTB had an exhibit at the Annual Celebration of America's Bounty, held September 19-21, 1997, at the Claude Moore Colonial Farm, McLean, Virginia. September 19 was set aside for field trips from several public schools in Fairfax County, Virginia. About 500 students, teachers, and accompanying parents visited our exhibit. The SRTB gave teachers a germination lesson for their students to do back in the classroom. The weekend was open to the public and several hundred visitors of all ages came by the SRTB's exhibit to find out more about the quality factors that make up a seed label and to see demonstrations of some tests done (such as purity, germination, and noxious-weed seed) to determine seed quality. The SRTB also displayed our new test for herbicide-resistant varieties of genetically-engineered soybean. There were other agricultural exhibits and demonstrations by agricultural trade groups, corporations, and other USDA agencies. The following SRTB staff members were on hand to greet visitors and answer questions: assistant branch chief Richard Payne; botanists David Bitzel and Susan Maxon; and seed marketing specialists Steve Hurst and Harold Laswell. This is the third year that SRTB has been invited to participate in the Bounty Celebration.

TRUENESS-TO-VARIETY UPDATE

The TTV program has been active this year. Evaluations of carrot and lettuce samples grown at the University of Florida in Gainesville were completed in May. Dr. Dan Cantliffe of the University of Florida and his staff conducted the trials. Results of the carrot trials are ambiguous because there is a question whether off-types based on misshapen roots are genetic or environmental in nature. Tall fescue grow-outs, transplanted to the field last fall

near Upper Marlboro, MD, were also completed last spring. Dr. Chuck McClurg, of the University of Maryland, helped coordinate these trials.

Spring small grains were planted and evaluated at South Dakota State University, Brookings, SD. Dr. Dale Reeves conducted these trials of spring wheat, barley, and oat. Dr. Reeve's plots were some of the best we have ever had. Remembering years when things did not turn out as well, he said, "Sometimes you just hit everything right."

Summer crops this year included pumpkins and melons planted at Giddings, TX, and cowpeas at Richmond, VA. Edward Beren of the Texas Department of Agriculture Seed Laboratory conducted the melon and pumpkin trials. The melon and cowpea TTV plots worked out well, but the pumpkins were a disappointment. Inadequate fruit set was the major problem with the pumpkins, as many samples set very few fruits in spite of vigorous vine growth. High temperatures or photoperiod may have been to blame. Melon results have been summarized and shipping information requested from the various State departments of agriculture.

As in the past, high numbers of off-types were found in cowpea. The cowpea tests were grown out near Richmond, VA, by Berkeley Glenn of the Virginia Department of Agriculture and Consumer Services. We found problems in most samples labeled as the varieties 'Hercules' and 'Colossus.' Other varieties were suspect as well. These results have not yet been summarized.

Recently, Kentucky bluegrass seedlings were transplanted by USDA and University of Maryland staffers from a greenhouse to a field at Upper Marlboro, MD. The plantings consist of 25 single plants, spaced 18 inches apart in the row, with a second test replication of each sample. The plants were started in a newly rebuilt, state of the art, Agricultural Research Service greenhouse on the Beltsville Agricultural Research Center (BARC), and transplanted to the field about 6 weeks later. The transplantings went well and the birds and critters have left them alone so far.

Our last report from Southern University, Baton Rouge, LA, is that the cabbage and Brussels sprouts are ready for transplanting. Evaluations will be made on these in December. These trials are conducted by Dr. Owusu Bandele and members of his staff.

Several apparent variety mislabelings were identified in each trial completed. Our Regulatory Section has begun its investigation by requesting shipping information from the State that submitted a particular sample.

Presently, we are organizing the fall plantings. Small grain trials will be at Tifton, GA, conducted by Dr. Jerry Johnson and his staff and at Manhattan, KS, by Vernon Schaffer of Kansas State University. Hard red winter wheat and barley samples will be grown at Manhattan and the others will be tested at Tifton.

Field trials are planted as part of the SRTB's FSA enforcement. Seed regulatory samples are collected and sent to us by State departments of agriculture. Check samples of varieties are supplied by seed certification agencies, foundation seed organizations, seed companies, and plant breeders. We log, sort, and send the seed samples to State grow-out cooperators at

several different locations each year. The State cooperator plants the samples grouped by the variety labeled by the seed shipper. A check sample of each variety is included if one is available. The cooperator cultivates the plots and makes observations to the time of harvest maturity, at which time SRTB personnel visit the location to make observations as to truthful variety labeling. Samples are noted which are significantly mixed with off-types or which are completely off (not the variety on the label). Our TTV results are then referred to the State seed control officials who submitted the samples.

A PROCEDURE FOR TESTING LIBERTY™ TOLERANT CORN

In the Fall 1996 issue of the Items of Interest in Seed Control, we summarized a testing procedure that the Testing Section of the SRTB developed to test soybean varieties for resistance to Roundup™. The SRTB has now developed a preliminary procedure for testing corn for resistance to the herbicide Liberty™ (glufosinate-ammonium).

It is our intent to develop, as time allows, tests that will be of benefit to the readers of this publication. We would like to encourage interested laboratories to try this procedure. Please inform the Testing Section of your questions and your results both good and bad.

Planting Samples

Moisten germination towels with water as you would for use in a regular germination test. We found it convenient to use 16 by 12 inch towels (regular weight). Place 2 layers of towels on a flat surface and plant seeds (25 seeds on a 16-inch long towel) about 1½ inches from the top edge of the towels. Fold up the bottom half of the towels to cover the seeds. Roll or fold the towels as you would for a germination test, being careful that seeds remain in the location they were placed. Four replicates of rolled towels are bound together with rubber bands, one just below the line of seeds and the other near the bottom of the towels. Each set of 4 rolled towels is placed upright in an 8 by 14-inch solid plastic bag.

Growth Conditions

Put the upright rolled towels in a germinator or growth chamber at 25°C with high light intensity for at least 16 hours a day. Adding some water to the plastic bags about a week after planting may be necessary.

Preparation of Herbicide Solution

Prepare a 0.5 percent solution of Liberty™ fresh for use on the fifth day after planting. This can be accomplished conveniently with the use of the commercial Liberty™ product containing 18 percent active ingredient. Use 5 ml of this herbicide plus 175 ml of water and mix thoroughly. Prior to spraying the seedlings, pour the solution into a 100-ml graduated cylinder. Insert the tube of a pump sprayer (the kind used to spray window cleaner) into the graduated cylinder.

Herbicide Treatment of Seedlings

On the fifth day after planting, unroll the towels and fold the top two layers of towels back exposing the germinating seedlings. Remove and discard any dead, moldy, or abnormal seedlings. Adjust the germinating seedlings as needed so that the seeds are in a straight line and the leaves of the seedlings extend over the top edge of the germination towels.

Before spraying with herbicide solution, fold the towels back to expose the seeds and shoots, keeping the roots covered. Spray until saturated. Record the decrease in the level of herbicide in the graduated cylinder after spraying the seedlings in one set of rolled towels. Spray the same amount of herbicide on the seedlings in each succeeding set of towels. We found 50 ml or less would saturate 400 seedlings. Spraying should be done in an area away from the germination test area to avoid herbicide injury to other test samples. Return the rolled towels into the plastic bags. To allow time for absorption of the herbicide solution, we left the tests out on a laboratory bench for about an hour before returning them to the growth chamber.

Evaluation

The seedlings can be evaluated 8 days after planting (3 days after spraying with herbicide). Resistant seedlings have normal green, expanded primary leaves; however, some leaf tips may show a small amount of yellowing. Susceptible seedlings appear stunted and yellow-green in color with yellow-green primary leaves. After several additional days, the susceptible seedlings turn brown and appear dead.

FEDERAL SEED ACT CASES SETTLED

The following cases were settled administratively under the FSA between July 1 and September 30, 1997. Under the administrative settlement procedure, the SRTB and the firms agreed to settle the cases for the amount specified with the firms neither admitting nor denying the charges:

- Olsen-Fennell Seeds, Inc., Salem, OR, has paid \$3,600 for false labeling of pure seed, other crop seed, inert matter, and noxious-weed seed; and failure to label the presence of noxious-weed seed. Seed regulatory officials in Kentucky, Missouri, and Virginia cooperated in the initial sampling and inspection.
- Production Plus, Plainview, TX, has paid \$200 for false labeling as to being a single variety. Seed regulatory officials in Oklahoma cooperated in the initial sampling and inspection.
- Tucker Seed Company, Inc., McRae, GA, has paid \$2,400 for false noxious-weed seed labeling; shipping seed containing noxious-weed seed exceeding a State's limits; and failure to label the presence of noxious-weed seeds, label the shipper's name and address or code, and keep a required record. Seed regulatory officials in Florida cooperated in the initial sampling and inspection.
- Williams Lawn Seed Company, Maryville, MO, has paid \$1,100 for false purity and noxious-weed seed labeling; and for failure to label the presence of a seed component, the presence of noxious-weed seeds, and the shipper's name and address or code. Seed regulatory officials in Texas cooperated in the initial sampling and inspection.

RYEGRASS FLUORESCENCE LIST

The National Grass Variety Review Board issues the ryegrass fluorescence list. We have not received any changes since our Summer issue.

<u>Perennial Ryegrass Variety Name</u>	<u>Percent Varietal Fluorescence</u>	<u>Perennial Ryegrass Variety Name</u>	<u>Percent Varietal Fluorescence</u>	<u>Perennial Ryegrass Variety Name</u>	<u>Percent Varietal Fluorescence</u>
2CB	1.97%	Gator	0.88%	Riviera	0.58%
89-90	2.15%	Gettysburg	2.74%	Riviera II	1.08%
90-14 ¹	7.12%	Greenland	1.20%	Roadrunner	2.53%
246	0.27%	Grimalda	2.00%	Rodeo II	2.47%
856	0.87%	Imagine	1.31%	SR 4100	0.37%
Academy	2.33%	ISI-RUPR (Gator II) ¹	2.50%	SR 4200	0.34%
Accent	0.56%	ISI-R2 (R2) ¹	1.25%	Seville	0.33%
Accolade	4.83%	Koos 90-2 ¹	3.85%	Sherwood	1.08%
Accord	4.08%	LRF-94-B6 (Prelude III) ¹	0.59%	Shining Star	0.10%
Achiever	0.93%	LRF-94-C8 ¹	0.64%	Stallion Select	2.37%
Advent	0.14%	LRF-94-B7E ¹	0.85%	Stardance ¹	1.90%
Affinity	0.77%	LRF-94-MPRH (Palmer (II)) ¹	0.23%	Statesman	1.27%
Agresso	2.00%	LRF-94-C7 ¹	0.80%	Statesman II	3.10%
All Star	0.47%	Laredo ¹	0.53%	Target	3.28%
Allaire II	1.15%	Legacy	0.37%	Tonga	11.53%
APM	0.59%	Lindsay	1.72%	Top Hat	0.77%
Aquarius	0.97%	Line Drive	2.72%	Topeka	2.34%
Assure	0.72%	Linn	5.00%	Vantage	2.19%
Bedford	1.40%	Lowgrow	1.31%	Wind Star	0.47%
Blackhawk	1.17%	Lynx	4.19%	Wizard	2.57%
Blazer III	1.18%	Magic	1.21%	Yorktown III	1.42%
Boardwalk	2.72%	Majesty	1.59%		
Breeze	1.57%	Manhattan II	0.65%	Annual	Percent
Brightstar	1.79%	Manhattan 3	0.88%	Ryegrass	Varietal
Brightstar II	2.24%	Morningstar	0.87%	Variety Name	Fluorescence
Buccaneer	2.01%	Mulligan	1.86%		
C-21 ¹	6.28%	Navajo	0.37%	Florida 80	98.89%
Caliente	0.74%	Newlinn	5.85%	Grazer	99.78%
Calypso	1.29%	NightHawk	1.39%	Gulf	99.02%
Calypso II	0.47%	Nobility	3.26%	Jackson	98.80%
Catalina ¹	3.18%	Nomad	1.03%	Marshall	96.00%
Cathedral	0.85%	Nova	1.00%	Rio ¹	98.97%
Charisma	2.39%	Omega 3	0.73%	Surrey	98.91%
Chaparral	1.62%	Omni	0.51%	TAM 90	98.45%
Chattam ¹	2.11%	Pageant	2.22%		
Citation III	0.96%	Palmer	1.04%		
Commander	1.02%	Palmer II	1.51%		
Cutter	1.85%	Passport	1.06%		
Dancer	0.78%	Patriot II	0.42%		
Dandy	2.00%	Pegasus ¹	2.41%		
Delaware Dwarf	0.61%	Pennant	0.50%		
Derby Supreme	2.85%	Pennant II	1.63%		
Dillon	4.14%	Pick PR 84-91 (Headstart) ¹	2.09%		
Divine	3.09%	Pick PR 15-91 (Jiffie) ¹	6.06%		
Edge	1.73%	Pleasure	1.42%		
Elegance	1.51%	PR8820	0.79%		
Elf	0.75%	Prelude	1.72%		
Elite	4.84%	Prelude II	2.25%		
Envy	0.22%	Prizm	0.71%		
Equal	1.98%	Quickstart	0.18%		
Evening Shade	1.17%	Regency	0.99%		
Excel	1.53%	Repell	0.33%		
Express	1.00%	Repell II	1.56%		
Fiesta II	1.14%	Reveille	2.00%		

¹ Experimental Designation and/or Variety

ADDRESS CORRECTION REQUESTED

If you find an error in your name, title, organization, or address on this or any other mail you receive from us, please send the correction and tell us on what correspondence the mistake was made. If you no longer wish to be on a mailing list, let us know that too.

Seed control officials: Please inform us when higher level personnel (i.e., Secretaries, Commissioners, Directors, etc.) changes are made, including address and title changes, so we can promptly update our records and mailing lists.

SUGGESTIONS FOR THE ITEMS OF INTEREST IN SEED CONTROL

We welcome ideas or articles you feel should be included in this publication. If you wish to submit an article, please send it to:

Don Dreyer
Attention: Items of Interest in Seed Control
Seed Regulatory and Testing Branch
Livestock and Seed Program, AMS, USDA
Room 209, Building 306, BARC-East
Beltsville, Maryland 20705-2325

ADDITION OF PLANT VARIETY PROTECTION CERTIFICATE

PLANT VARIETY PROTECTION CERTIFICATE
(Issued August 12, 1997, through October 20, 1997)

KIND VARIETY	APPLICANT	TITLE (GEN.)	1994 PVPA
PEANUT NC 12C	North Carolina Agricultural Research Service	Y (3)	Y

(*) No limit to the number of generations of certified seed beyond breeders seed.

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